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BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

November 8, 2007

Madam Chair and members of the Subcommittee, I am Benjamin H. Grumbles, Assistant Administrator for Water at the United States Environmental Protection Agency (EPA). Thank you for inviting me to discuss sustainable water policies. In particular, I appreciate the opportunity to describe what I call the 3 R's of water sustainability: Reducing waste and inefficiency; Re-using water; and Restoring watersheds.

Too often we take for granted a system that provides, clean, safe and inexpensive water: from the drinking water that automatically appears when we turn on our taps, to the water that allows us to flush our toilets, to our local watersheds where we live, work, and play.

But water is a finite resource – even though about 70% of the Earth's surface is covered by water, less than 1% is available for human use. Recent headlines about water crises in Atlanta, Georgia and the communities served by the Colorado River Basin are raising the collective awareness of our Nation about this precious and life-sustaining resource. States and thousands of communities across the nation are facing difficult challenges in

meeting their water resource needs. A report by the Government Accountability Office in 2003 indicated that between now and 2013, 36 states are projecting water shortages.

Studies of water use by the United States Geological Survey show that water withdrawn for the public supply increased by 7 percent from 1995 to 2000 -- an increase of 1 trillion gallons. The U.S. Bureau of Census projects that the U.S. population will increase by 3% by 2010, 12% by 2020 and 30% by 2040. Given these population increases, water systems throughout the nation will need to increase water capacity. An even more serious issue is that population is growing faster in areas where water is the scarcest. Six western states had demands on public supply increase by more than 20 percent in the same time period.

EPA's Office of Water is working closely with the Western Governors' Association and the Western States Water Council to implement the recommendations in their June 2006 Report "Water Needs and Strategies for a Sustainable Future." Contained within the Report are many recommendations that are consistent with EPA initiatives as well as recommendations contained in a report released by the White House Office of Science and Technology Policy titled, "A Strategy for Federal Science and Technology to Support Water Availability and Quality in the United States."

The responsibility for water, both in terms of quality and quantity, is divided among many different federal agencies as well as each of our states, tribes, and territories. In light of this shared and diverse responsibility, it is imperative that we all work collectively to meet the growing needs and demands of our limited water resources. We

can no longer merely look at water based on quantity or based on quality. Quality and quantity are inextricably linked, for with out one, we can not have the other.

One of EPA's top priorities is to ensure America's waters resources and water infrastructure systems are clean, safe and sustainable. As you know over the past 5 years EPA has consistently and repeatedly articulated and implemented, its Four Pillars of Sustainable infrastructure – better management, full cost pricing, water efficiency, and the watershed approach. It is an effort to help ensure that our nation's water infrastructure is sustained into the future by fundamentally changing the way America views, values, and manages its water resources and infrastructure. It is a collaborative effort involving drinking water and wastewater utility managers, professional and trade associations, local watershed protection organizations, private sector experts in technology, engineering, and finance, and federal, state, and local officials.

The Three R's for Sustaining Water Resources

As EPA advances its Four Pillars of Sustainable Infrastructure through the tools of technology, innovation, and collaboration, we see an opportunity to keep pace with our water resource needs of the future by developing a comprehensive strategy built upon several key initiatives. All of these initiatives seek to stretch our limited water resources and, therefore, we must Reduce, Reuse, and Restore. The 3 R's are soundly based in science and policy, whether it is Reducing based on a Presidential Executive Order (E.O. 13423), Re-using highly treated wastewater or stormwater, or Restoring a watershed that is polluted by an abandoned mine with efforts from a volunteer such as a Good Samaritan

that had no role in creating the pollution but wants to Restore their watershed so that the resource can be used. Not one of these initiatives by themselves, or one agency by itself, will solve all the problems. But collectively and collaboratively we can have a meaningful positive impact on our limited water resources.

Executive Order (EO) 13423 Section 2 (c) requires that beginning in 2008, Federal agencies reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015. The Office of Water is responsible for developing Water Efficiency Implementation Guidance for all agencies covering the three elements of compliance: baseline development, efficiency opportunity identification/implementation, and necessary reporting. Federal agencies are also encouraged to include WaterSense products and services within their implementation strategies to meet the E.O. goals.

Reducing Water Waste and Inefficiency

Reducing waste isn't just about pollution prevention (a key component of our Clean Water Act programs), It's about cutting water waste and inefficiency too. On average, the per capita residential water use in the U.S. is 100 gallons of water a day and in many areas of the country this rate is even higher. Areas with higher than average per capita water consumption are often experiencing unprecedented population growth. As a result, communities across the country are facing challenges regarding water supply and water infrastructure.

Improving water efficiency is one of the most effective ways that communities can manage their supplies. With less water moving through the system, utility operating costs will decrease. They will avoid costs for treatment chemicals, residuals disposal, and energy associated with water collection, treatment, and disposal. In addition, water efficiency can help utilities better manage capacity expansion because necessary expansions can be delayed or reduced in size.

EPA is working to foster a national ethic of water efficiency, so that water is valued as a limited resource that should be used wisely. In June 2006, we announced WaterSense, an innovative partnership program that helps American consumers, businesses, and governments make smart water choices that save money and maintain high environmental standards without compromising performance.

EPA's WaterSense program reduces water use across the country by creating an easy-to-identify label for water-efficient products that is backed by strict criteria and independent certification. WaterSense labels products that use 20 percent less water and perform as well as—or better than—conventional models. To earn the WaterSense label, products must be independently tested and certified to meet EPA's criteria for efficiency and performance.

In less than two years, WaterSense has already become a national symbol for water efficiency among utilities, plumbing manufacturers, and consumers. Awareness of the WaterSense label is growing every day. Eighty models of high-efficiency toilets from

twelve different brands have earned the label, and WaterSense labeled faucets should be available to consumers by next year. In addition to manufacturers, EPA is working with utilities, retailers, distributors, and the media to educate consumers on the benefits of switching to water-efficient products.

For example, toilets account for about 30 percent of the water used in the home, and Americans waste 900 billion gallons per year by flushing old, inefficient toilets.[1] By replacing an older toilet with a WaterSense labeled model, a family of four could reduce total indoor water use by about 16 percent and, depending on local water and sewer costs, save more than $90 annually. If every home replaced just one old toilet with a WaterSense labeled High Efficiency Toilet, the water savings would be enough to supply nearly 10 million U.S. households with water for a year. Savings at the tap also result in energy savings. If just one in every 10 homes in the United States were to install WaterSense labeled faucets or aerators in their bathrooms, in aggregate, they could save 6 billion gallons of water, and more than $50 million in the energy costs to supply, heat, and treat that water.

The potential for preserving our water supply for future generations through this voluntary program is great, and WaterSense will continue working on new product areas in the future. Projected savings for initial WaterSense product labeling areas (toilets, faucets, showerheads, irrigation controllers) and certification of irrigation professionals, based on a 10 percent replacement of existing fixtures, is estimated to be 155 billion gallons, or nearly twice the average annual rainfall of Seattle. The average home,

[1] All statistics on pages 6-7 should be considered estimates based on currently available data.

retrofitted with water-efficient fixtures, can save 30,000 gallons per year. If just one out of every 10 homes in the U.S. upgraded to water-efficient fixtures (including ENERGY STAR labeled clothes washers), it could save more than 300 billion gallons and nearly $2 billion annually. Additional savings can be expected from the program in the future as WaterSense adds new products and implements its New Homes program. This New Homes effort will combine water-efficient products, enhanced design features, and homeowner education into a single residential program.

We are also spreading the word against water waste through our Water Efficiency Leader program to recognize organizations and individuals who are working to improve water efficiency through innovative processes and technologies. We continue to support a new national organization called the Alliance for Water Efficiency (AWE), which is establishing a water-efficiency information clearinghouse and will expand to complement WaterSense's activities including monitoring national plumbing and appliance standards and codes. We are collaborating with public officials and utility managers to identify strategies and tools for reducing water loss from systems. One of EPA's newest and most impressive facilities, the Region 8 Headquarters, will save water through the use of high efficiency plumbing fixtures such as waterless urinals and dual-flush toilets. It also has a green roof.

We are also working with public officials and utility managers to identify strategies and tools for reducing water loss from systems. Making water distribution more efficient will

not only save water and reduce costs, but it will save energy and significantly improve sustainability and increase capital available for infrastructure investment.

We have come a long way in a very short time with this program. As the demands on our water resources grow, the need for the products and services we are developing through WaterSense will become even more important. We look forward to working with our stakeholders and Congress as we look to expand our water efficiency efforts in this area.

Reusing Water

We know that the continued growth in demands being placed on limited available fresh water supplies in many areas of the country, along with tightening discharge standards will likely lead to an increased dependency upon water reuse. Areas with limited water resources such as the arid US Southwest, already have well-established water reclamation and reuse programs. These will continue to grow and improve.

For example, over 525,000 ac. Ft/yr (nearly 470 million gallons per day) of water were recycled in California in 2003, with nearly 46 percent of that used for agricultural irrigation and the current goal set by State legislation is for this to increase to 1 million acre feet (nearly 893 million gallons per day) by the year 2010.

The popularity of reuse has also grown in other areas such as Florida, which now has over 1.2 billion gallons per day of total reuse capacity and over 630 million gallons per day of reclaimed water actually being reused, with 50 percent of that used for landscape

irrigation in public access areas such as residences, golf courses, parks and school grounds.

The WaterReuse Association has estimated the amount of water reused in the US in 2004 to be about 2.6 billion gallons per day and projected this amount would increase to about 12 billion gallons per day by 2015. As demands on existing water supplies increases, such as we are seeing in cities like Atlanta and Las Vegas, we expect that even more communities will become interested in making greater reuse of reclaimed water.

Restoring Watersheds

EPA is also approaching our water resource and infrastructure challenge by integrating watershed-based approaches into decision making at the local level so that communities can make the most informed and cost-effective infrastructure decisions that also help to ensure the overall health of the watershed. In many cases, we know that the adoption of watershed-based approaches, such as source water protection, water quality trading, and watershed permitting, in conjunction with traditional "hard infrastructure" approaches, can help reduce overall infrastructure costs.

EPA is advancing the President's vision of "Cooperative Conservation" through grassroots, community–driven actions to protect local watersheds and waterbodies of natural significance. Last December, we convened a group of drinking water, wastewater, and stormwater utility managers to discuss watershed approaches to utility management.

Building off the success of that effort, we asked the National Advisory Council on Environmental Policy and Technology to provide EPA with recommendations on how to advance our efforts in this area. We received initial recommendations from the group in July and they are currently engaged in the second phase of their project.

Other Activities

We see stormwater as one of the most promising re-use opportunities. Our vision is to work with communities, companies, and citizens to view stormwater as a water resource, not simply a waste product. We're putting technology and innovation to work in our stormwater permitting program and our new "Green Infrastructure" strategy. Beneficial re-use of stormwater, whether on a watershed scale or at individual sites such as rain gardens and rain barrels can help to conserve our water resources.

EPA is also working to carry out a research program on infrastructure that is focused on the "underground and out of sight" network of drinking water distribution and wastewater collection pipes. The initial plan primarily identifies research, demonstration and technology transfer activities for wastewater collection systems and drinking water distribution systems. And while our WaterSense program is focused on more efficient water use by end users, we are also working to identify effective leak detection strategies that public water systems can use to minimize leakage in the distribution systems. Water efficiency strategies that incorporate water-saving technology along with innovative management practices to use less water can be implemented and still allow a water system to deliver an unchanged or improved level of service to consumers. "Acceptable"

industry standards for water loss (non-revenue water) are on the order of 15-20%. However, in many utilities water loss through deteriorated distribution pipes can exceed 60%. EPA is working with stakeholders to identify and promote tools, resources and processes for public water systems to further water efficiency through activities such as universal metering, conducting water audits and implementing leak detection and repair programs.

EPA's State Revolving Fund programs can help states meet the challenges posed by infrastructure construction and rehabilitation. Total assets of these two successful programs exceed $75 billion and are expected to grow in the future. EPA is also proposing a new tool – Water Enterprise Bonds – to accelerate and increase investment in the nation's water infrastructure. These will be private activity bonds for public-purpose drinking water and wastewater facilities. Providing expanded access to private activity bonds for communities will allow them to finance, build, and manage water facilities using public-private partnerships that deliver the best mix of technology, construction, and operations with the appropriate transfer of risk to their private sector partners. Consistent with one of our four pillars of sustainability, this proposal would also require state or local governments that use the bonds to implement full-cost pricing for services within five years. If enacted, this initiative would lead to a more robust market offering of new solutions to our water infrastructure investment challenges.

Climate Change

While we will continue to carry out activities under our Sustainable Infrastructure

strategy, EPA and its partners are learning more about the impacts of climate change and we are doing more to confront the serious challenges it poses for our water resources. Increasingly, we understand climate change may have impacts on water infrastructure and watersheds that will affect our actions under the Clean Water Act, Safe Drinking Water Act, and various ocean and coastal laws.

While there remains some uncertainty on the scope, timing and potential regional impacts of climate change related effects, EPA and its partners are taking prudent steps now to assess emerging information, evaluate potential impacts of climate change on water programs, and identify appropriate response actions. The National Water Program recently established an intra- agency Climate Change Workgroup, made up of senior managers from EPA headquarters and regional water offices. The Water Program Climate Change Workgroup is working to improve understanding of climate change impacts on water resources and is finalizing a Climate Change Strategy for the National Water Program.

The 21st Century Water Commission Act of 2007

Clearly, it is important to carefully consider how the water resources of this Nation are used and how we can effectively manage them into the 21st Century. The status of the Nation's water resources will continue to change with growing population, increasing urbanization, changing industrial and agricultural practices, and changing climate. Science can inform us about the status of our water resources and help us anticipate the likely effects of water-policy and management practices on those resources. Authority to

manage water resources is largely delegated to States, Tribes, and local municipalities. Federal agencies are committed to productive collaboration with these water resource managers. In the future, water managers will need to update policies and practices to respond to changing water resource conditions and to reflect new knowledge. We are committed to collaboration and integration, not confrontation and duplication. Our experiences have shown us how coordination of federal, state, tribes, and local constituents can help us to accelerate environmental progress.

Thank you Madam Chair, for the opportunity to testify on HR 135 and EPA's actions to promote innovative and coordinated policies to sustain our water resources into and beyond the 21st Century. I'd be happy to answer any questions you or your colleagues may have.